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EXAMINER	
BANH, DAVID H	

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2854	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/574,332	BURRI ET AL.	
	Examiner	Art Unit	
	DAVID BANH	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/16/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 17-38 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

3. Claims 17-25, 27-30 and 35 rejected under 35 U.S.C. 102(b) as being anticipated by Hsu (US 2001/0013732).

For claim 17: Hsu teaches a rotation body (see Fig. 1) comprising a stator **1** (see paragraph 20) comprising at least one stator winding **12**, the stator having a support end (see Fig. 6, the support end of the stator **1** is the end supported by the shaft **4**, which is the right end) and a free end (see Fig. 6, the free end of the stator **1** is the left side) and a rotor **3** positioned about and enclosing the stator free end (see Figs. 1 and 6, the rotor **3** encloses the all of the stator **3** and the stator holding **2** can also be considered a portion of the rotor closing off the free end of the stator in the axial direction), the rotor including at least one permanent magnet **30** (see Fig. 6 and paragraph 23) and positioned for rotation relative to the stator (paragraph 30, the rotor is rotated), the rotor extending between a first bearing **34** (see Fig. 6 and paragraph 25) and a second spaced apart bearing **32** (see Fig. 6 and paragraphs 23-26, the foot portion **32, 321** of the cylinder **31** of the rotor **3** supports the rotor **3** on the shaft and thus is a bearing), the at least one permanent magnet **30** provided substantially over all

of the area along the longitudinal axis of the rotor **3** between the first and second bearings **34, 32** (see Fig. 6, the magnet **30** extends almost the entire way from the leftmost end of bearing **32** to bearing **34**), wherein current flowing through the stator winding **12** interacts with at least one permanent magnet **30** and generates a torque acting on the rotor **3** (see paragraph 30).

For claim 18: Hsu teaches the rotation body of claim 17 and further teaches at least two stator windings **12** provided at axially offset points on the stator (see paragraph 20, the stator windings are recited in plural, and Fig. 6, a structure corresponding the element **12**, being rectangular box with an X therein is presented in at least four locations across the entire stator offset in both axial and circumferential positions).

For claim 19: Hsu teaches the rotation body of claim 17 and further teaches at that at least stator winding generates a magnetic field for driving the rotor over at least half of the axial length of the rotor (see Fig. 6 and paragraph 30, the stator **1** generates a magnetic field for driving the rotor **3**, and regardless of which orientation the stator windings **12** are in, the field generated will affect at least to a nominal amount all of the magnet **30** which is over half the length of the rotor **3**).

For claim 20: Hsu teaches the rotation body of claim 17 and further teaches that the stator winding is distributed over approximately an entire axial length of the stator (see Fig. 6, the two stator windings **12** are shown by the boxes with big X markings as being distributed over almost the entire axial length of the stator **1**).

For claim 21: Hsu teaches the rotation body of claim 17 wherein the stator winding **12** is disposed on the outer surface of the stator **1** (see Fig. 6, where the stator is element **1**, the windings are disposed on an outer surface of the stator **1**).

For claim 22: Hsu teaches the rotation body of claim 17 wherein the rotor **3** is a cylinder shell **31** (see paragraph 22 and see Fig. 1).

For claim 23: Hsu teaches the rotation body of claim 17 wherein the rotor **3** is a cylinder body **31** (see paragraph 22, and Fig. 1) comprising a blind hole (see Fig. 6, the stator is disposed within the rotor, thus the rotor must have the hole element for containing the stator).

For claim 24: Hsu teaches the rotation body of claim 17 wherein the rotor is mounted on the stator by at least one of the bearings extending between the rotor and the stator and at least one of the bearings extending between the rotor and an external retainer or at least the first of the bearings extending between the rotor and the stator and the second extending between the rotor and the external retainer (see Fig. 6 and paragraph 22-26, the rotor is supported by one of the bearings **32** extending between rotor **3** and an external retainer being shaft **4**)

For claim 25: Hsu teaches the rotation body of claim 17 further comprising a cylinder body **31** is supported on the rotor **3** and fixed thereto by a positive lock (see Fig. 1 and paragraph 23-26, the cylinder body **31** is fixed onto the rotor **3** by being continuous with the rotor **3** which constitutes a positive locking mechanism).

For claim 27: Hsu teaches the rotation body of claim 17 wherein the permanent magnet **30** is rod shaped (see Fig. 6, the permanent magnet **30** is rod shaped as seen

in Fig. 6, it may also be annual as it likely extends along the entire inner surface of the rotor **3**).

For claim 28: Hsu teaches the rotation body of claim 17 wherein further the permanent magnet **30** is disposed on an inner surface of the rotor casing (see Fig. 6).

For claim 29: Hsu teaches the rotation body of claim 17 and the recitation that the rotor defines one of a deflecting cylinder, drawing roller, ductor, central cylinder, steel cylinder, printing blanket cylinder, form cylinder, plate cylinder, rubber cylinder, knife cylinder, collecting cylinder, cutting cylinder, inking roller or dampening roller is a recitation of intended use the does not further limit the claim. The rotor is spins and thus can be use as any of the above cylinders. Particularly, the rotor is a cylinder body and thus can be considered a central cylinder.

For claim 30: Hsu teaches the rotation body of claim 17. The recitation that the rotor is used in a folding apparatus or in a reel changer is a recitation of intended use. The circularly rotating body of the rotor is capable of being used to drive a folding apparatus or a reel changer.

For claim 35: The recitation that the rotation body defines a bearing for a cylinder, or a roller of a printing machine is a recitation of intended use. A rotation body as taught by Hsu is capable of being used as a roller in a printing machine or a bearing.

Claim Rejections - 35 USC § 103

4. Claims 26 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 2001/0013732) in view of Stiel (US Patent 6,543,355).

For claim 26: Hsu teaches all of the limitations of claim 26 except comprising a cooling system for cooling at least a partial area of the stator. However, Stiel teaches a rotation body for a printing machine comprising a stator (see Fig. 1) and further teaches a cooling system for a part of the stator (column 4, lines 5-10, coolant can flow through the stator). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a cooling system for the stator for the purpose of preventing an outbreak of fire or a deformation caused by an excess buildup of thermal energy from dissipation of the electric current in the windings into heat.

For claim 31: Hsu teaches the rotation body according to claim 17, as explained above, but does not teach that the rotation body is used in a printing machine drive. However, Stiel teaches a printing machine **34** driven by a rotation body (see all of Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the rotation body structure taught by Hsu in the printing machine drive of Stiel for the purpose of driving the printing machine drive with less rotation shock to print materials.

For claim 32: The combination of Hsu and Stiel teaches the rotation body according to claim 31 and Hsu further teaches a control device (external control, paragraph 20) configured to control the strength of current in the stator winding **12** (see paragraph 20, even if the external control only activated and deactivated the device, it would control the strength of current from zero to a non-zero level).

For claim 33: The combination of Hsu and Stiel teaches the rotation body of claim 31 and Stiel further teaches an angle sensor for measuring a rotary position of the

rotor (column 2, lines 39-55, sensors **21, 24** is arranged to determine the angle of the roller and rotor).

5. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 2001/0013732) in view of Puschnerat (US Patent 5,950,538).

Hsu teaches all of the limitations of claim 34 as found in the parent claim 17. Hsu does not teach a printing rotation machine to comprise the rotation body taught by claim 17 in addition to rubber blanket cylinders, counter printing cylinders and plate cylinders coupled in pairs with the rubber blanket cylinders wherein each cylinder is driven by one of more cylinders including the rotation body. However, Puscherat teaches transfer cylinders that are blanket cylinders (column 1, line 22) and counter pressure cylinders (column 1, lines 24-25), the cylinders together forming printing locations (column 3, lines 20-28), plate cylinders (column 3 lines 29-30) which are coupled in pairs with blanket cylinders (column 3, lines 34-36) and are driven by a common drive (column 2, lines 1-16). It would have been obvious to one of ordinary skill in the art the time the invention was made to modify Puschnerat by adding the rotation bodies taught by Hsu for the purpose of serving as drives to actuate the plate, blanket and pressure cylinders.

6. Claim 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 2001/0013732) in view of Hajek et al. (US Patent 6,408,748).

For claim 36: Hsu teaches a rotation body (see Fig. 1) comprising a stator **1** (see paragraph 20) comprising at least one stator winding **12**, the rotor including at least one permanent magnet **30** (see Fig. 6 and paragraph 23) and positioned for rotation relative to the stator (paragraph 30, the rotor is rotated), the rotor extending between a first

bearing **34** (see Fig. 6 and paragraph 25) and a second spaced apart bearing **32** (see Fig. 6 and paragraphs 23-26, the foot portion **32, 321** of the cylinder **31** of the rotor **3** supports the rotor **3** on the shaft and thus is a bearing), the at least one permanent magnet **30** provided substantially over all of the area along the longitudinal axis of the rotor **3** between the first and second bearings **34, 32** (see Fig. 6, the magnet **30** extends almost the entire way from the leftmost end of bearing **32** to bearing **34**), wherein current flowing through the stator winding **12** interacts with at least one permanent magnet **30** and generates a torque acting on the rotor **3** (see paragraph 30). Hsu teaches selectively providing current to the stator winding (see paragraph 20, the stator winding is connected to a controller, which selects when current will be provided to the stator winding). Hsu does not teach positioning a portion of a first end of a cylinder or roller about the rotor such that the rotor defines a bearing therefore and positioning a portion of the second end of the cylinder or roller about a secondary bearing in a method of driving a cylinder or roller of a printing machine. However, Hajek et al. teaches providing a rotor **118** as a bearing for one end of a cylinder **116, 117** (see Fig. 32) and providing a second bearing for supporting the cylinder on the opposite end (see column 10, lines 5-25), the rotor serving to drive the cylinder of the printing machine (see column 10, lines 5-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the rotation body and rotor taught by Hsu to support a cylinder of a printing machine as taught by Hajek et al. for the purpose of driving it and operating the printing machine to produce printed substrate.

For claim 37: Hsu teaches a rotation body (see Fig. 1) comprising a stator **1** (see paragraph 20) comprising at least one stator winding **12**, the rotor including at least one permanent magnet **30** (see Fig. 6 and paragraph 23) and positioned for rotation relative to the stator (paragraph 30, the rotor is rotated), the rotor extending between a first bearing **34** (see Fig. 6 and paragraph 25) and a second spaced apart bearing **32** (see Fig. 6 and paragraphs 23-26, the foot portion **32, 321** of the cylinder **31** of the rotor **3** supports the rotor **3** on the shaft and thus is a bearing), the at least one permanent magnet **30** provided substantially over all of the area along the longitudinal axis of the rotor **3** between the first and second bearings **34, 32** (see Fig. 6, the magnet **30** extends almost the entire way from the leftmost end of bearing **32** to bearing **34**), wherein current flowing through the stator winding **12** interacts with at least one permanent magnet **30** and generates a torque acting on the rotor **3** (see paragraph 30). Hsu does not teach positioning a portion of a first end of a cylinder or roller about the rotor such that the rotor defines a bearing therefore and positioning a portion of the second end of the cylinder or roller about a secondary bearing in a method of driving a cylinder or roller of a printing machine.

However, Hajek et al. teaches providing a rotor **118** as a bearing for one end of a cylinder **116, 117** (see Fig. 32) and providing a second bearing for supporting the cylinder on the opposite end (see column 10, lines 5-25), the rotor serving to drive the cylinder of the printing machine (see column 10, lines 5-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the rotation body and rotor taught by Hsu to support a cylinder of a printing machine as

taught by Hajek et al. for the purpose of driving it and operating the printing machine to produce printed substrate.

For claim 38: The combination of Hsu and Hajek et al. teaches all of the limitations of claim 38 except that the second bearing element includes a second rotation body including a second stator including at least one stator winding, and a second rotor including at least one permanent magnet, positioned for rotation relative ot the second stator, the second rotor extending from a first bearing to a second spaced apart bearing, and at least one permanent magnet provided over substantially all of the area along the axis of the rotor between first and second bearings, wherein current flowing through the stator winding interacts with the at least one permanent magnet and generates a torque magnet. However, all of the limitations of such a rotation body are already taught by Hsu as shown above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to duplicate the rotation body of Hsu and provide it as a second bearing for the cylinder taught by Hajek et al. for the same purpose of providing rotation force to the cylinder to print desired images on substrate.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID BANH whose telephone number is (571)270-3851. The examiner can normally be reached on M-Th 9:30AM-8PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571)272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DHB

/Judy Nguyen/
Supervisory Patent Examiner, Art Unit 2854